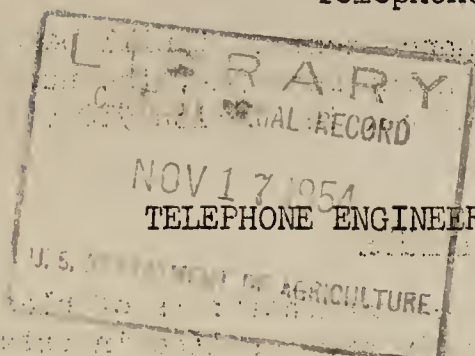


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UNITED STATES DEPARTMENT OF AGRICULTURE
Rural Electrification Administration
Telephone Engineering Division



February 12, 1954

TELEPHONE ENGINEERING NEWSLETTER ISSUE NO. 2

Newsletters are intended to provide a means for answering questions that arise in the field. They are not intended to be instructions nor to replace in any respect the presently approved channels for establishing requirements and procedures. Suggestions for subjects will be gladly received.

Using Appropriate Ringers

The "List of Materials Acceptable for Use on Telephone Systems of REA Borrowers", on page ra - Telephone, desk set - carries a footnote which states that the telephones listed thereon are acceptable when equipped with appropriate ringers listed on page rb. The intent of this note is that ringers for sets made by one manufacturer would be used only in the telephone sets made by the same manufacturer. It is understood that attempts have been made to use ringers of one manufacturer in telephones of another. This in general is not feasible because the drillings of ringers and telephone sets are not all compatible.

Line Wire Tie Holding Power

The Reinforced Tie, Drawing 163 of Telephone System Construction Contract, (Form DS-T-10R1), shows the tie wire placed so that it wraps from left to right over the line wire which places it "in phase" with the pre-formed spiral reinforcing splints. It has come to light recently that some splints are manufactured with reverse lay so that using the tie wire as shown in DS-T-10R1 results in out of phase relation between tie and splints. Tests have been made which show that if the tie wire is placed so that it wraps in the reverse way, from left to right under the line wire, the tie will be equal to the left to right "in phase" tie in holding power. This practice is not recommended, however, as it causes more abrasive action on the tie wire. Steps are being taken to have all splints manufactured with the same lay.

Subscriber Line Carrier

Carrier equipment, designed to provide subscriber line service over one pair of line wires from a central office to numerous subscribers located at considerable distances from the office, have been successfully placed in operation on three systems of REA borrowers. One location is in Utah, another is in Alabama and the third is in West Virginia. After these have been in service a sufficient length of time to determine more

details of their characteristics and maintenance costs, it will be possible to determine their ultimate field of use. In the meantime, the use of this equipment should follow the criteria set out in Section 910 of the TE & CM.

Plastic Sheathed, Plastic Insulated Cable Splices

A recent conference between representatives of manufacturers of plastic sheathed, plastic insulated cable and REA engineers resulted in establishment of a committee to develop specifications for splicing cable of this type. The members of this committee are representatives of the manufacturers since REA considers that the solution of the problems involved in splicing this kind of cable is the responsibility of the cable manufacturers. The committee expects to develop a method for interim use and establish a long range program to develop standards, and obtain data needed in developing a splice that can be adopted as standard by the plastic cable industry.

A Symposium at Lincoln, Nebraska

A symposium on telephone engineering will be held at the University of Nebraska, Lincoln, Nebraska, February 22 to 26, inclusive, under the direction of the REA Telephone Engineering Division. Invitations have been extended to consulting engineering firms interested or active in the REA program. The subjects to be covered will include the basic problems confronted by consulting engineers in the design and construction of REA-financed telephone systems.

Joint Use with 14.4 Kv

Instructions are in preparation covering the problems to be considered before deciding on joint use with 14.4 Kv.

Technical Standards Committee "A" (Telephone)

Committee "A" which was established in accordance with REA Bulletin 345-3 (Telephone) has been meeting once a week since January 13, 1954. One of the first actions of this committee was to accept the "Suggested List of Materials" as the "List of Materials Acceptable for Use on Telephone Systems of REA Borrowers." The committee also has accepted several items of telephone material. A supplement to the "List" is in the works and will be issued soon.

Attention is called to the fact that Staff Instruction 345-1 states that the committee shall receive proposals on system design standards, specifications, drawings, materials and equipment submitted by any sponsor including manufacturers, members of REA staff, and subscribers and employees of REA borrowers.